

In the Abstract

The invention relates to an oscillating piston machine, comprising a housing (12) which has an essentially spherical housing inner wall, four pistons (32-38) which rotate together about an axis (40) of rotation which is approximately in the center of the housing being arranged in the housing (12); in which case, of the four pistons (32-38), in each case two pistons which are approximately diametrically opposite one another with respect to the center of the housing form a rigid piston pair (32/36; 34/38), the two piston pairs (32/36; 34/38) being capable of pivoting to and fro in opposite directions about a common pivot axis (42) which runs approximately perpendicularly with respect to the axis (40) of rotation, the two piston pairs (32/36; 34/38) being arranged in criss-cross fashion with respect to the pivot axis (42) in such a way that in each case two pistons of the two piston pairs (32/36; 34/38) have their piston working faces opposite one another in order to form a working chamber (48, 50) between them, each piston pair (32/36; 34/38) having a bearing section (52, 56) for mounting the piston pair (32/36; 34/38) on the pivot axis (42), and in each case a side wall section (54) for both pistons of the piston pair (32/36; 34/38), for laterally delimiting one of the working chambers (48, 50) in each case. The bearing section (52, 56) and the side wall sections (54) are constructed integrally with one another and are arranged on the same side of the respective piston pair (32/36; 34/38) (Fig. 4).